

MARKETING & PRICING



Debt 2: Accessing the Market
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CDIAC

CALIFORNIA
DEBT AND
INVESTMENT
ADVISORY
COMMISSION

Outline of presentation by:

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SESSION OBJECTIVE



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1. Demystify the bond pricing process
2. Learn to evaluate price execution on your bond sale
3. Develop techniques to improve your future results
4. Acquire some useful tools and tips

This session isn't designed to make you a bond "expert," nor will it focus on individual bond issues. It will offer practical advice to use in both competitive and negotiated sales to help you get started toward better results.



SESSION OUTLINE

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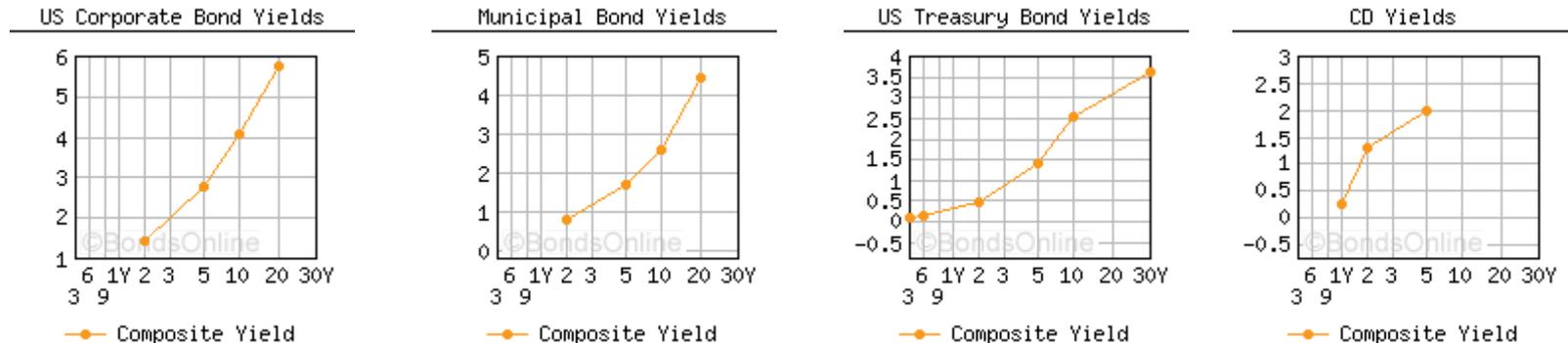


ISSUANCE PROCESS – REVIEW



UNDERSTANDING INTEREST RATES

What is a “yield curve”? It’s a representation of interest rates over time:



What a yield curve can tell you; and, what it cannot

The “shape” of the yield curve is important. By analyzing the shape of the curve, one can estimate what the market’s expectations are for future conditions.

A yield curve normally has an upward sloping shape – called a “positive” or “normal” yield curve. In a normal yield curve, shorter-term yields are lower than longer-term yields, with yields generally increasing as time to maturity increases. Yields are higher on longer maturities because these bonds have more volatile prices for a given change in interest rates.

In the “Tool Kit” there are several resources that you can use to develop a greater understanding of rates using yield curves compiled by others. (Tool Kit begins on page 16.)



PRICES & YIELDS MOVE INVERSELY

Once interest rates are established by the issuer, they remain constant – usually for the life of the loan; what changes are bond values

The higher the yield (for a fixed interest rate) the lower the price (value) for that bond, and vice-versa

Buyers seek to protect themselves from future adverse changes in the price (value) of their investments

Benchmarking is critically important in municipal pricing – the market establishes price (and value) by “relational” means – ***“What should the yield on this bond be compared to the available yield on something else?”***

There are some useful benchmarks you can use for comparison:



General

Bond Buyer Indices (11, 20, RBI)

U.S. Treasuries (“constant maturity”)

S&P Composites

Specific

Municipal Market Advisors (“MMA”)

Municipal Market Data (“MMD”)

Issues comparable to yours

Refer to the “Tool Kit” for examples of the specific benchmarks.

Tool Kit begins on page 16.



FACTORS INFLUENCING YIELDS

Fundamental

- ✓ The overall state of the economy
- ✓ Inflation – especially expectations
- ✓ Fiscal/monetary policy (the “Fed”)

Sets overall tone and direction

Technical

- ✓ Supply and demand
- ✓ Similarity to other issues
- ✓ Individual features of the offering

Sets relationships to the benchmarks



Start the pricing exercise several weeks ahead of time by creating a pricing workbook, chart or table of factors that will affect your interest rates. Then, each day, plot the direction of influence on prices & yields. Consult the benchmarks weekly at first, then daily to develop a “grid” of where you think the yields will be established on your issue. This is an excellent visualization tool to understand market sentiment and strengthen your negotiating skills.



EXAMPLE OF A PRICING TIMELINE



TARGETED INVESTOR TEMPLATE

Tier I	Tier II	Tier III
<ol style="list-style-type: none"> 1. Trades over \$1.0 million 2. Very price sensitive 3. Active traders 4. Covered by every Wall Street firm <p>Examples OF Tier I investors:</p> <ul style="list-style-type: none"> ✓ Large pension funds ✓ Insurance companies ✓ Major money managers ✓ Major mutual funds ✓ Common trust funds 	<ol style="list-style-type: none"> 1. Trades over \$250k 2. Sophisticated, but less price sensitive than Tier I investors 3. Usually not active traders 4. Covered by many firms <p>Examples of Tier II investors:</p> <ul style="list-style-type: none"> ✓ Small insurance companies ✓ Corporations ✓ Small pension funds ✓ Regional money managers ✓ Regional trust funds and/or directed accounts 	<ol style="list-style-type: none"> 1. Trades less than \$50k 2. Least price sensitive of investors – may include active retail accounts 3. Buy and hold accounts 4. Very rarely trade 5. Quality conscious; name driven 6. Coverage often omitted by many firms <p>Examples of Tier III investors:</p> <ul style="list-style-type: none"> ✓ Small corporations ✓ Small bank trust accounts ✓ High net worth individuals ✓ Locally-directed individuals

INVESTOR INTEREST BY MATURITY (AN EXAMPLE)



WHAT IS “MR. MARKET” SAYING?

Begin with a basic understanding of what the overall markets are doing, then look at your own issues; follow with issues comparable to yours.

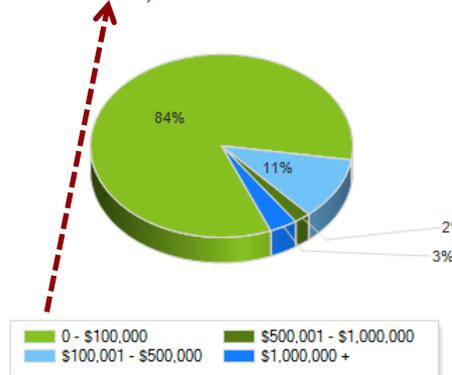
You can search for this data on the Municipal Securities Rulemaking Board’s “EMMA” web site, found at: www.emma.msrb.org.

EMMA can furnish valuable insight into the level of customer activity and buying in the market.

This data shows the average number of trades and the daily volume for the period September 4, 2013 through October 3, 2013.

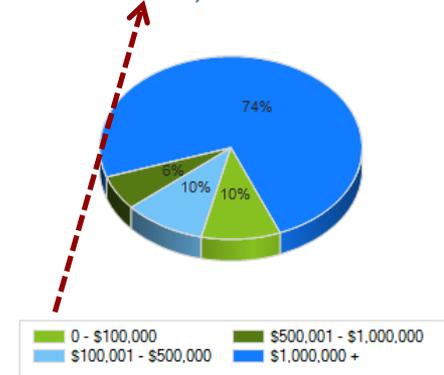
Number of Trades by Trade Size ?

998,541 Total Trades



Par Amount Traded by Trade Size ?

\$268,904 Million



IN THIS DATA SET, CUSTOMER “BUYS” WERE HALF OF THE MARKET DURING THIS PERIOD; CUSTOMER BUYS OUTPACED SELLS BY MORE THAN 2 TO 1 IN NUMBER AND 1.5 TO 1 BY AMOUNT DURING THE SAME PERIOD. THIS IS A POSSIBLE INDICATION OF A “RISING PRICE/FALLING YIELD” MARKET.



REVIEW YOUR OWN BONDS

The table below displays trades larger than \$100,000 of a City of Los Angeles General Obligation Bond, issued August 2009, maturing September 1, 2023, during the period August 13, 2010 through August 20, 2010.

(Caution: Smaller trades may be “outliers” and often do not represent market yields.)

Then, look at trading levels for your outstanding bonds, if they are similar in attributes to the proposed bond issue. (This part is easier if you have the “CUSIP” number for the existing bonds; you’ll find that on the official statement for that issue.)

Investors bought bonds at yields between 3.213% and 3.437% during a single 24-hour period. Notice that bonds traded at a variety of yields; but, it appears that 3.30% is the most recent “proven” level.

Trade date & time	Trade Price	Yield	Par Amount	Type of Trade
08/20/2010 : 12:29 PM	102.307		250,000	Inter-dealer Trade
08/20/2010 : 12:27 PM	102.237		250,000	Inter-dealer Trade
08/20/2010 : 12:04 PM	103.484	3.30	200,000	Customer bought
08/20/2010 : 09:15 AM	102.307		200,000	Inter-dealer Trade
08/20/2010 : 09:13 AM	102.237		200,000	Inter-dealer Trade
08/19/2010 : 02:38 PM	102.247		100,000	Inter-dealer Trade
08/19/2010 : 02:38 PM	102.407	3.437	100,000	Customer bought
08/19/2010 : 02:33 PM	102.307		100,000	Inter-dealer Trade
08/19/2010 : 02:38 PM	102.307		100,000	Inter-dealer Trade
08/19/2010 : 01:56 PM	104.175	3.213	250,000	Customer bought
08/19/2010 : 01:56 PM	102.300		250,000	Inter-dealer Trade
08/19/2010 : 01:25 PM	103.485	3.30	100,000	Customer bought
08/19/2010 : 01:18 PM	102.367		100,000	Inter-dealer Trade
08/19/2010 : 01:15 PM	102.307		100,000	Inter-dealer Trade
08/18/2010 : 03:45 PM	102.301		100,000	Inter-dealer Trade
08/18/2010 : 03:45 PM	104.176	3.213	100,000	Customer bought
08/18/2010 : 11:55 AM	103.657	3.278	100,000	Customer bought
08/18/2010 : 11:55 AM	102.301		100,000	Inter-dealer Trade
08/16/2010 : 11:47 AM	102.805	3.387	300,000	Customer bought
08/16/2010 : 11:47 AM	102.305		300,000	Inter-dealer Trade



COMPARABLE ISSUES

The next step is to examine issues scheduled for sale that are “comparable” to the one you will be selling.



Let’s assume you are selling \$10 million, lease revenue bonds for a new city hall, with a projected rating of “A” called “Newbonds.”

289,335,000	Pomodoro County	Pension Obligation Bonds, Series 2013A Taxable
193,000,000	Really Big City	Senior lien wastewater revenue bonds (Moody’s: Aa2)
100,000,000	Really Big State	General Obligations (Moody’s: Aa2; S&P: AA; Fitch: AA)
136,000,000	Really Big City	Subordinate lien wastewater revenue bonds (Moody’s: Aa3; S&P: AA)
12,000,000	Likebonds	2013 Court House Renovation COPs (Moody’s: A2; S&P: A; Fitch: A+)
8,000,000	Rural School District	General obligation bonds (S&P: A+)
5,780,000	Urban School District	School Building Bonds, Series 2013
3,000,000	Otherbonds	Golf Course Revenue Bonds (rating forthcoming)

Look for issues that are similar in size, rating and purpose. Also look for similar geography, frequency of issue, demographic similarities, etc.



BASIC TRUTHS ABOUT BUYERS

Investors are not “generic”



Institutional buyers:

- ✓ *buy in large size*
- ✓ *make decisions quickly*
- ✓ *very price sensitive*

Retail buyers:

- ✓ *buy in smaller size*
- ✓ *take longer to make decisions*
- ✓ *not as price sensitive*

Accessing them is not as easy as it looks . . .



WHAT WORKS?

Retail buyers favor bonds that are easier to understand or which are more common – they value simplicity and safety.

- ✓ This is the primary target for “safe sector” bonds such as water and sewer bonds, essential projects such as fire, police, etc. (but sometimes, not electric or gas)
- ✓ This is also the predominant target for general obligation bonds – think: local school district unlimited tax bonds, many state bond issues, etc.

Institutional buyers favor bonds that reward risk taking with appropriate returns – they compare investment opportunities across markets – they value yield and financial transparency.

- ✓ This investor class will accept “fancy” call features – unusual couponing strategies – sinking funds – junior liens, etc.
- ✓ This is the target for more complex credit structures: tobacco bonds, pension obligation bonds, variable and adjustable rate debt, etc.



WHAT TO LOOK FOR IN THE PRICING

There are numerous prices that will be used:

1. Retail offering price:

- ✓ Price paid to the broker/dealer by the final investor

2. Primary (bid) price:

- ✓ The price paid to you (the issuer) by the wholesaler (the underwriter)

3. Concession price:

- ✓ Price paid by a broker/dealer who is not the originating underwriter



The critical one to focus on is the retail offering price (this is presented as the “preliminary scale.”)

That’s the foundation for successful negotiation. If you know what the investor will pay, then it’s much easier to ascertain if the underwriter has delivered the “best” sale or is relying on other “middle-men” to do so.

YOUR BASIC “TOOL KIT”



THE PRELIMINARY SCALE

Here is the most recent illustration of rates from your underwriter, along with three “comparable” issues identified by the underwriter’s desk.



	\$10,000,000	\$3,000,000	\$100,000,000	\$12,000,000
ISSUE:	“NEWBONDS”	“OTHERBONDS”	“REALLY BIG STATE BONDS”	“LIKEBONDS”
MATURITY	CITY HALL LEASE REVS	GOLF COURSE COP	GEN'L OBLIGATION	COURT HOUSE
2014	1.05%	1.65%	0.60%	
2015	1.30%	1.95%	0.75%	
2016	1.65%	2.25%	1.05%	
2017	1.85%	2.50%	1.30%	
2018	2.25%	2.85%	1.65%	2.15%
2019	2.65%	3.35%	2.05%	2.60%
2020	3.00%	3.65%	2.30%	2.90%
2021	3.30%	3.85%	2.50%	3.20%
2022	3.60%	4.05%	2.75%	3.50%
2023	3.90%	4.35%	3.00%	3.75%
Rating:	A3/A-/NR	NR/BBB+/BBB	Aa2/AA/AA	A2/A/A+
Spread:	\$15/1,000	\$25/1,000	\$2/1,000	\$12/1,000



ORDER PERIOD RESULTS

You concluded that the illustration on the previous page was “close enough” to the market, and gave the underwriter permission to enter the market with those prices (yields). Here are the orders received:

<u>MATURITY</u>	<u>AMOUNTS</u>	<u>COUPON RATES</u>	<u>PRICES YIELDS</u>	<u>ORDERS</u>	<u>COMMENTS</u>
2014	945,000	1.05%	100%	850	Retail, advisory, (500 stocked by senior manager)
2015	955,000	1.30%	100%	All	A.O.N. w/'16's
2016	970,000	1.65%	100%	All	(See '15)
2017	985,000	1.85%	100%	1,900	Stocked by members
2018	1,005,000	2.25%	100%	300	Stocked by members
2019	1,030,000	2.65%	100%	2,600	Insurance company (on a “swap”)
2020	1,060,000	3.00%	100%	3,350	3,000 stocked by non-member; 350 away to retail
2021	1,095,000	3.30%	100%	1,200	1,000 to hedge fund; 200 stocked by member
2022	1,135,000	3.60%	100%	4,000	2,500 to hedge fund; 1,500 stocked by senior manager
2023	1,180,000	3.90%	100%	3,650	3,000 stocked by managers; balance to hedge fund



What stands out:

1. Several of the maturities are significantly “oversubscribed;” that is, there are significantly more orders than there are bonds. (2017, 2019, 2020, 2022, 2023).
2. In two of the oversubscribed maturities, there are orders from a “hedge fund.”
3. The longest maturities don’t seem to have any retail orders at all. (2022 & 2023)
4. What does the term “stocked” mean?
5. What’s a “swap?” (2019)



NEGOTIATING A FINAL PRICE



The red shaded areas show the original proposal. We improved on the red areas and had to give up higher yields on the maturity shaded in green.

<u>MATURITY</u>	<u>AMOUNTS</u>	<u>COUPON</u>	<u>PRICE (YIELD)</u>	<u>PRELIMINARY YIELDS</u>
2011	945,000	1.00%	100%	1.05
2012	955,000	1.25%	100%	1.30
2013	970,000	1.50%	100%	1.65
2014	985,000	1.75%	100%	1.85
2015	1,005,000	2.25%	2.30%	2.25
2016	1,030,000	2.70%	2.65%	2.65
2017	1,060,000	2.90%	3.00%	3.00
2018	1,095,000	3.30%	100%	3.30
2019	1,135,000	3.40%	3.45%	3.60
2020	1,180,000	3.75%	3.80%	3.90
<u>Interest Cost:</u>			<u>1,719,917</u>	<u>1,772,110</u>

Interest cost saved through this negotiation: \$52,000!



BENCHMARKS: BLOOMBERG “RATES & BONDS”

www.bloomberg.com

Choose “Market Data,” followed by “Rates & Bonds,”

followed by “US Treasuries.”

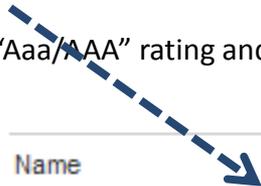
This displays “spot” yields on U. S. Treasuries; 

and, “spot rates” for 1, 2, 5, 10, & 30 year municipals,

assuming “Aaa/AAA” rating and 5% coupon rate.

Tenor	Coupon	Price	Last	1 Month	1 Year	Time
3 Month	0.0000	0.0200	0.02%	+1	-8	14:16:22
6 Month	0.0000	0.0300	0.03%	-1	-10	14:15:43
12 Month	0.0000	0.1000	0.10%	-3	-7	14:15:43
2 Year	0.2500	99-26+	0.34%	-13	+7	14:09:04
5 Year	1.3750	99-28¼	1.40%	-38	+71	14:13:11
10 Year	2.5000	98-29	2.63%	-32	+87	14:22:52
30 Year	3.6250	98-23	3.70%	-18	+72	14:28:39

Change shown in basis points



Name	Yield	1 Day	1 Month	1 Year	Time
Muni Bonds 1 Year Yield	0.18%	+2	-10	-3	14:00:00
Muni Bonds 2 Year Yield	0.34%	0	-6	+6	14:00:00
Muni Bonds 5 Year Yield	1.22%	+1	-34	+62	14:00:00
Muni Bonds 10 Year Yield	2.59%	+1	-44	+94	14:00:00
Muni Bonds 30 Year Yield	4.21%	0	-51	+133	14:00:00

Change shown in basis points



BENCHMARKS: BONDSONLINE

S&P COMPOSITE YIELDS

www.bondsonline.com

Click on “Today’s Market,” then click on “Composite Bond Yields.” Use “Click for Data” hyperlink to produce table like the one below. NOTICE that the yield curve is “A-rated” and the table shows “AAA,” “AA,” and “A.”

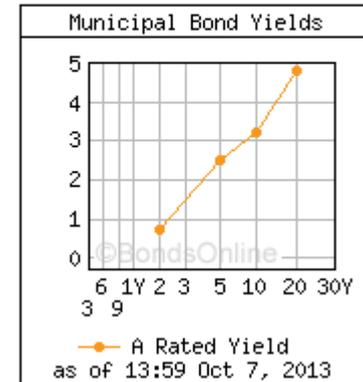
Municipal Bonds (13:59 ET October 7, 13)

[Historical Data](#)

Maturity	Yield	Yesterday	Last Week	Last Month	Yield Change	TEY* (28%)	Spread
2yr AAA	0.42	0.49	0.49	0.58	-0.03	0.58	0.27
2yr AA	0.56	0.55	0.57	0.63	0.02	0.78	0.47
2yr A	0.71	0.68	0.82	0.87	0.09	0.99	0.68
5yr AAA	1.32	1.38	1.29	1.58	-0.17	1.83	0.46
5yr AA	1.68	1.61	1.54	1.94	0.00	2.33	0.96
5yr A	2.49	2.60	2.46	2.70	-0.14	3.46	2.09
10yr AAA	2.54	2.48	2.42	3.17	0.11	3.53	0.93
10yr AA	2.86	2.82	2.71	3.28	0.03	3.97	1.37
10yr A	3.21	3.35	3.13	4.10	-0.51	4.46	1.86
20yr AAA	3.82	3.79	3.84	4.30	0.00	5.31	-
20yr AA	4.22	4.09	4.15	4.61	0.10	5.86	-
20yr A	4.79	4.76	4.71	5.01	0.02	6.65	-

* Tax Equivalent Yield for 28% Federal Income Tax.

Municipal Bonds Yield

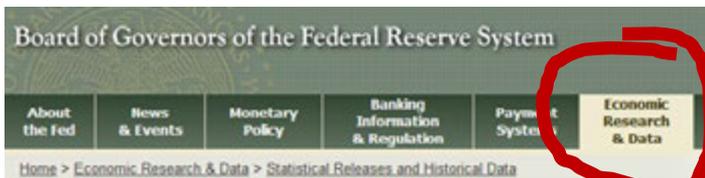


BENCHMARKS: BOND BUYER INDEXES

(FROM FEDERAL RESERVE INTEREST RATE DATA)

www.federalreserve.gov

Click on “Economic Research & Data,” then click on “Statistical Releases and Historic Data.” The municipal bond data is available weekly.



What is it? The “Bond Buyer Index,” is a benchmark for general obligation, 20 years to maturity, mixed quality (but generally assumed to approximate “low AA” credit quality); Thursday quotations. This index is based on a survey of market makers. It is a theoretical yield. There is also an “11-bond index (higher quality; and, a “revenue bond index.”

October 4, 2013
Selected Interest Rates
Yields in percent per annum

Instruments	2013 Sep 30	2013 Oct 1	2013 Oct 2	2013 Oct 3
Federal funds (effective) 1 2 3	0.06	0.08	0.07	0.08
Commercial Paper 3 4 5 6				
Nonfinancial				
1-month	0.03	0.05	0.05	0.05
2-month	0.05	0.05	0.06	0.05
3-month	0.10	0.08	0.08	0.10
Financial				
1-month	0.05	n.a.	n.a.	n.a.
2-month	0.07	0.09	0.10	n.a.
3-month	0.10	0.10	0.11	0.10
CDs (secondary market) 3 7				
1-month	n.a.	n.a.	n.a.	n.a.
3-month	n.a.	n.a.	n.a.	n.a.
6-month	n.a.	n.a.	n.a.	n.a.
Corporate bonds				
Moody's seasoned				
Aaa 15	4.56	4.59	4.58	4.57
Baa	5.39	5.42	5.40	5.37
State & local bonds 16				4.53



TAKEAWAYS . . .



THANKS FOR YOUR ATTENTION! QUESTIONS AND/OR DISCUSSION?

